

Washington State Department of Agriculture Specialty Crop Block Grant Program

Final Performance Report Agreement No. 12-256-B-0851 November 24, 2010

Contacts

Project Contact: Larry Oline, Contracts Manager Washington State Department of Agriculture 1111 Washington St. S.E. Olympia, WA 98504-2560 (360) 902-2001 loline@agr.wa.gov

Contents

- 1. Washington State Horticulture Association, Safe and Sustainable Practices, WSDA No. K181
- Farm City Alliance, Market Promotion at Mercer Island Farmers Market, WSDA No. K182
- 3. Washington State University, researching Grapevine Fanleaf Disease, WSDA No. K183
- 4. Cascade Harvest Coalition, Puget Sound Farmers Market Outreach, WSDA No. K184
- 5. Neighborhood Farmers Market Alliance, Farmer's Market Promotion, WSDA No. K185
- 6. Washington Mint Commission, Extracting Oil by a Microwave Extraction Process, WSDA No. K186
- 7. Vashon Island Growers Association, Farmer's Market Promotion, WSDA No. K187
- 8. Washington State Farmers Market Association, Farmer's Guides, WSDA No. K188
- 9. Washington State Potato Commission, Food Safety Program, WSDA No. K189
- 10. Maple Valley Farmers Market, Open a New Farmers Market, WSDA No. K190
- 11. Poulsbo Farmers Market, Specialty Crop Farmer Promotion, WSDA No. K191
- 12. Institute for Washington Future, Educational Program for Bio-products, WSDA No. K192

Overview

Washington State is one of the most productive growing regions and our growers produce some of the finest foods found anywhere in the world. Nearly \$10.9 billion in food and agricultural products were exported through Washington ports in 2009, the third largest total in the U.S. The Washington State Department of Agriculture (WSDA) partnered with 12 industry groups to share \$287,906 in funding from this grant to help expand economic opportunities and enhance sales and production of specialty crops. Here are the final reports from these projects.

Recipient: Washington State Horticulture Association (K181)

Project/Grant Name: Growers Response to Agriculture, Safe and Sustainable Practices

(GRAS²P)

Grant Award: \$49,500

Money Expended: \$49,365.90

Money Remaining: \$134.10

Summary of Activities Performed:

The Washington State Department of Agriculture (WSDA) partnered with the Washington State Horticultural Association (WSHA) to address food safety, educational, and environmental concerns through implementation of GRAS²P: Growers Response to Agriculture, Safe, and Sustainable Practices.

The GRAS²P program was designed to provide growers with the tools, technical support, and education to successfully prepare for a third party verification audit. A tree fruit specific guidance manual of policies, elements, and standard operating procedures addresses the components of domestic (USDA GAP) and export (GLOBAL GAP) food safety audit programs. Similar components are being prepared for sustainability issues with the initial focus on soil fertility, crop protection, and water management utilizing a continuum of field and business practices. Food safety and sustainability are a part of doing business and staying in business. GRAS²P is a program for audit readiness.

Goals and Outcomes Achieved:

GRAS²P is a comprehensive grower program implementing economic, environmental, and educational production practices. Public confidence and retention of tree fruit consumption will be assured through the development of tree fruit specific food safety and sustainability standards.

The objectives of GRAS²P are as follows:

- Develop grower-friendly, practical, science-based food safety and sustainability tools.
 - Growers enrolled in GRAS²P will successfully pass a third party verification audit.
 - o Growers enrolled in GRAS²P will implement tree fruit industry specific sustainability standards proven to be environmentally sound.
- Institute effective state-wide communication strategies between growers, packing houses, and markets which support fruit safety and industry economic viability.
- Document process, participation, and practices to provide the foundation for proactive political, market, and regulatory responses.

Goals:

- Identify and assess existing food safety programs: USDA GAP, Primus, SQF, GLOBAL GAP.
 - Common elements. Differentiating elements.
 - Elements applicable and specific to tree fruit crops (apples, cherries, pears, etc.)

- Additional elements that might be significant to a tree fruit specific food safety program. Elements significant to document in the near term for a crop specific food safety program at the state level.
- 2. Identify and integrate sustainability components.
 - Initial focus to address crop protection, soil fertility, and water management.
 - Recognizing that additional elements are critical to overall sustainability but that the initial focus would be limited to three elements for which there is strong science as well as defined field practices.
- 3. Recruit and utilize three industry advisory teams: economic, environment, and education.
 - The primary work of these teams was to: a) ground truth the findings from Steps 1 & 2, b) identify an overall industry-wide approach, and c) serve as an on-going sounding board as topic-specific issues/needs arose throughout the life of the project.
- 4. Develop the GRAS²P Guidance Manual.
 - Upon industry review of the initial draft of the Guidance Manual, it was deemed most useful for the Guidance Manual and the workbook to be combined into one binder.

Outcomes & Dissemination:

- Outcome #1: Audit Summary Sheet and Written Document identifying GRAS²P Food Safety Components
 - This document is in the form of a summary grid with major audit programs identified in the columns and primary topics and subtopics identified in the rows. Specific statements are identified within the grid.
 - Initiated at a joint meeting in Ellensburg in March 2009. The Advisory Teams
 utilized the summary grid as a working document to discuss and to prioritize those
 elements most appropriate for a tree fruit specific food safety audit readiness
 program.
 - Subsequently, members of the Advisory Teams determined that utilizing USDA GAP (for fruit marketed domestically) and GLOBAL GAP (for fruit marketed internationally) would offer efficiency and effectiveness in fostering industry-wide adoption of a tree fruit specific food safety program for audit readiness.
- Outcome #2: Written document identifying GRAS²P Sustainability Components
 - This document is in the form of a summary grid with major sustainability elements and subtopics identified in the rows and a continuum of practices identified in the columns. Specific practices are identified within the grid. Much of the initial effort was based upon sustainability work developed and implemented within the California wine industry.
 - As with the food safety, a summary grid served as the Advisory Teams' working document for discussion and prioritization of elements.
 - Utilizing a Lickert type scale of Basic/Legal, Good, Better, and Best, industry Advisory Team members identified sustainable practices within the major areas of crop protection, soil fertility, and water management. This document is currently undergoing additional review by Advisory Team members.
- Outcome #3, and 4: Guidance Manual
 - These deliverables (i.e. policy manual, food safety and sustainability components to be addressed within GRAS²P program, operating procedures, and growerfriendly workbook) were incorporated into development of the GRAS²P Guidance Manual V1 and disseminated to Advisory Team members for review during the

- summer months. Utilizing the very valuable feedback gained during this process, major edits were made in October and November and Version 2 was published.
- Version 2 was disseminated to participants in the three GRAS²P workshops that took place in December as well as to interested growers/warehouse personnel who attended the 105th annual Washington State Horticultural Convention in Wenatchee in early December 2009. Version 2 is offered simultaneously in both a three-ring binder format as well as a CD included in the back of the binder and containing all documents in electronic format to allow for customization at the orchard/block level.

Lessons Learned:

1. Being All Things for All Programs – Need to Narrow the Focus First The initial intent was to develop a guidance manual that would address the components of all major food safety and sustainability programs. Based on the work of the Advisory Teams along with many of their prior individual efforts/experiences at the warehouse level, it was determined that the industry-wide success would be much more attainable with a more narrow but still useful approach.

Approximately 60-70% of the state's tree fruit production is marketed domestically and any produce earmarked for federal procurement programs must have passed a USDA GAP audit. Hence, for this segment of the state's production, it was decided that preparing growers for a USDA GAP audit would be of greatest benefit and use. The USDA GAP program also provides a good foundation of documentation and food safety practices upon which to build compliance with other food safety programs. Approximately 90% of the content of most food safety programs in shared amongst auditing schemes.

Upon review of all the audit schemes recognized within export markets, industry leaders selected GLOBAL GAP as the program offering a strong on farm framework, working diligently to recognize and/or benchmark with other schemes, and providing strong training/support for both the association and grower members.

2. Sustainability – Verb, Noun, Adjective, Quest for Definition More than once the project hit bumps in the road regarding the plethora of definitions and want-to-be definitions associated with sustainability and sustainable. The philosophy of GRAS²P is to not get stuck in defining the term but rather to encourage through development and use of tools and science-based materials an approach to the tree fruit business that considers economic, environmental, and educational practices necessary for current and future production.

3. Industry Involvement – Advisory Teams

This is not a new lesson to be learned but rather reinforcement of previous experiences. Critical to the adoption and success of any industry-wide program is the active participation of Advisory Teams to share in the development process, to review of deliverables prior to broad dissemination, and to extend the message to other segments of the industry.

4. Critical Review of Guidance Manuals

The timing by USDA to release the November 2009 GAP Audit and the industry review of the GRAS²P manual were in very close proximity to each other. Unfortunately, the updated USDA GAP did not make it into the guidance manual and some initial credibility was lost at the early December workshops as the guidance manual did not contain the latest and best information. It will be important for the success of future efforts that a more effective means of two-way communication is employed.

Future Plans:

Guidance Manual Version 3 (included):

- 1. USDA provided an updated Good Agricultural Practices audit in mid-November. This was incorporated into the Guidance Manual along with updates for the EZ Audit Tool for Documentation and the EZ Audit Tool for Orchards. Critical to both the accuracy of the next version as well as adoption by growers will be incorporating GRAS²P tips that are in congruence with the USDA manual for auditors as to what are acceptable practices and/or policies for each element of the audit criteria.
- 2. Refinement of the sustainability portion was completed in January 2010 and was incorporated into the next published version of the manual (included).
- 3. This work is being funded by the growers with support from grants.

Workshops for Growers and Warehouse Personnel

- The first in a series of workshops was initiated immediately following the WA State Horticultural Convention. Approximately 70 industry members participated (growers, warehouse field staff, fruit brokers and researchers). These workshops were repeated in late February/early March and again in late March/early April, 2010.
- 2. GRAS²P staff will also be going to warehouse growers upon request to assist them in initiating/refining their GRAS²P food safety program at the orchard level.
- 3. This work is being funded by the industry with support from grants.

Benchmarking Software

- 1. GRAS²P staff and industry Advisory Team members are working to identify a core software management information system package that can be adapted to the tree fruit industry program to benchmark and measure both food safety and sustainability. Key to telling the growers' story is having the metrics to document the work.
- 2. Again, this process will be done in a step-wise fashion with sustainability first. Food safety will quickly follow in the development process. It is hoped that GRAS²P can be a collaborator and thereby simultaneously provide growers with a tree-fruit specific package and save costs.

Additional Information:

We look forward to building upon the foundation established through this grant effort. On behalf of tree fruit growers, the Washington State Horticultural Association greatly appreciates the opportunity to work with the Washington State Department of Agriculture within the Specialty Crop Block Grant Program. This partnership has been a critical ingredient in being able to initiate a state-wide food safety and sustainability program at the orchard level. Not only have the grant funds helped to pay for key parts of the GRAS²P Program, but there is also a demonstration of cooperative effort amongst those implementing federal programs (e.g. WSDA providing the audits for USDA GAP) and those who are striving to be in compliance with those programs.

Enclosure: GRAS2P Guidance Manual V3

Contact: Susan Pheasant, GRAS²P Program Director Washington State Horticultural Association PO Box 136 Wenatchee, WA 98807 (509) 665-9641 Gras2p@wahort.org

Recipient: Farm City Alliance (K182)

Project/Grant Name: Mercer Island Farmers Market (MIFM) Specialty Crop Promotion and

Outreach Project

Grant Amount: \$17,400

Money Expended to date: \$14,197.80

Money Remaining: \$3,202.20

Summary of Activities Performed:

The project involved multiple outreach and communication tactics, produce tastings, education boards, and the coordinated efforts of dozens of volunteers and market vendors.

The specialty crop grant supported:

- 7 color print advertisements in the *Mercer Island Reporter*;
- 5 black and white print ads in the Bellevue Reporter;
- 1 ad in *Parent Map* and 1 ad in the summer addition of *98040* (local magazines);
- A direct mailing to all 10,850 island households;
- Production of 1,000 reusable market bags, 300 posters, and 2,000 handouts; and
- 7 featured crop samplings and 4 featured crop displays.

In addition, the market web page http://www.mifarmersmarket.org/welcome/ and a newly created Facebook page shared information on special events, featured crops, and related information. These online tools complemented the grant-supported efforts and helped further educate market customers, which supports the market's overall mission.

While the project focused on encouraging customers to purchase specialty crops, the market manager also sent weekly communication out to all of our vendors and encouraged prepared and added value food vendors to incorporate featured specialty crops into their products for that upcoming weekend.

For example, Got Soup regularly integrated the specialty crop of the week into at least one of their weekly soups. After a while, the owner would ask about the next week's featured crop so that he could start planning his menu right away. In our samplings, we would also incorporate all of the various ways that our vendors brought product to market. For example, on apricot/pluot day, we sampled all of the various fruit, along with jams, syrups, sorbet/gelato, soup, cider/juice, crepes, and pastries to show customers all of the various products and uses each week.

Goals and Outcomes Achieved:

The goals and purpose of the project were to:

- Promote unique and heirloom crops using a variety of tactics:
- Increase customer attendance, knowledge of, and interest in consuming specialty crops;
- Increase vendor revenues by drawing more customers toward specialty crop producers; and
- Highlight the importance of preserving farmland and supporting local farmers that produce unique crops.

To meet these goals, MIFM set forth the following objectives:

- 1. Increase average market attendance by 5%; and
- 2. Increase overall vendor revenues by 5%.

While the market brought in additional customers exceeding the attendance objective by more than 5%, it appeared that the economic downturn may impact consumer spending, however, the average vendor sales increase by 7%.

- 2008 average sales for 9 specialty crop vendors: \$11,937.02
- 2009 average sales for 12 specialty crop vendors: \$12,778.77
- Increase sales from 2008 to 2009 = 7%

The 2009 market expansion in both size and season length brought in additional vendors – an average of 35 total vendors per week. On average, approximately 16 vendors sold fruits and vegetables, whereas the remainder sold prepared foods and value-added goods. In 2009, the market had 12 specialty crop vendors out of a total 24 vendors. This increase in vendors may have also impacted consumer spending by creating more competition amongst specialty crop growers.

Vendor Feedback

One of our prepared food vendors (Devra Gartenstein of Patty Pan Grill) who have been selling at farmers markets for over 10 years told the market manager that MIFM is one of her top markets. Not only is it her first year with us, but the other two markets that she compares us to are well established and year round.

In addition, Full Circle Farm (Carnation) and Hedlin Farm (La Conner) told our market manager that MIFM has been a top market for them for the last two years.

Specialty Crop Education

When asked what event or entertainment would prompt customers to come to the market, 38% of surveyed shoppers (156 out of 407) responded with "food samplings." The next highest response was "chef demos," at 21%.

When customers can taste market fresh fruits and vegetables, they can truly understand why they are worth buying. In turn, they can better understand the importance of supporting local producers. Fresh, local fruits and vegetables simply taste better.

Lessons Learned:

Through this project, the market's leadership team, manager, and large volunteer base learned a number of lessons, described in the following categories: produce samplings, messaging, and education.

Produce samplings

Tastings and samplings are critical in promoting most produce. The customer survey found samplings to be the market's most successful events. This is an area that can be expanded and refined.

Messaging

Clear messaging is vital to communicating project purposes. At the beginning of this
project, we set out to highlight heirloom varieties of local produce. We eventually

- developed a shared understanding and definition of "heirloom" to communicate with our audience.
- Similarly, we did not clearly articulate the definition of "specialty crops." In the future, it may be simpler to eliminate specific terminology and focus more on messaging the importance of "locally grown fruits and vegetables."

Education

 One goal of the project was to educate customers on the importance of farmland preservation. In the interest of not overloading market patrons with literature, we gently reminded them that by purchasing locally grown fruits and vegetables, they were supporting local farms and the preservation of agricultural land. This is an important piece of information to share, and may be worth further exploration next year.

Future Project Plans:

In the future, it may be worth considering featuring a farm each week, rather than a specific crop. This way, we can tell the full story of farmers and their commitment to food and community. The combination of quality produce and a sincere dedication to sustainable agriculture may spark a deeper customer response to the need to support local producers.

Tastings and samplings are critical in promoting most produce. The customer survey found samplings to be the market's most successful events. This is an area that can be expanded and refined.

Some vegetables (e.g. eggplant, squash) could be better marketed via prepared food samplings. Moving forward, MIFM should consider collaborating with prepared food vendors and/or local chefs to demonstrate the variety of cooking methods for certain types of produce.

Along the same lines, it is important to know what can and cannot be sampled. For example, a melon sampling was scheduled until the market manager discovered that was against the rules, given that melons are high hazard fruit.

Fruits and vegetables with many varieties (e.g. apples, tomatoes) should have their own market day, rather than be paired with other similar produce. For example, "Apples and Pears" day may have been a bit overwhelming, given the variety of locally produced apples and pears. Focusing on one type of fruit will give that specialty crop more distinction and may offer customers more incentive to purchase.

Lastly, we learned that our produce promotion needed to be amenable to Mother Nature and the availability of specific crops. Coordination and communication with vendors enabled the featured crop schedule to adapt.

Contact: Allison Campbell Schwartz, Board Member

PO Box 71

Mercer Island, Washington 98040

(206) 779-05739

alliecampbell@gmail.com

Recipient: Washington State University (K183)

Project/Grant Name: Conducting research to prevent the spread of Grapevine fanleaf

disease for the sustainability of the wine grape industry in Washington State

Grant Amount: \$35,591

Money Expended: \$35,591

Summary of Activities Performed:

We conducted field-based research activities during June and October 2009 to document grapevine fanleaf disease symptoms caused by Grapevine fanleaf virus (GFLV). In some wine grape cultivars (viz. Pinot Noir and Chardonnay), typical symptoms of fanleaf disease were observed. These symptoms were recognized by visual observations in the vineyards. In some other cultivars (viz. Merlot and Cabernet Franc), no visual symptoms of fanleaf disease were observed. Such asymptomatic infections made it difficult for visual diagnosis of fanleaf disease in vineyards. Such asymptomatic infections of GFLV were diagnosed by molecular diagnostic assay described in activity (d) *Develop diagnostic method for the detection of Grapevine fanleaf virus*, in our work plan.

We completed studies on spatial distribution of GFLV-infected grapevines. The results indicated random distribution of infected vines, suggesting primary spread through planting virus-infected cuttings rather than infield transmission by nematode vector. Due to absence of the nematode vector in Washington vineyards, they are promoting sanitation and replanting with virus-tested cuttings an effective strategy to eradicate GFLV from virus-infested vineyard blocks.

Under objective 1, Generate science-based knowledge on Grapevine fanleaf disease, activity (b) Monitor Certified Nurseries for Grapevine fanleaf disease, we have tested about 200 samples collected in June/July 2010 from an additional five cultivars in a Certified Nursery and commercial vineyards for the presence of Grapevine fanleaf virus (GFLV) and other viruses. GFLV was not detected in these samples.

Under objective 1, Generate science-based knowledge on Grapevine fanleaf disease, activity (d) Develop diagnostic method for the detection of Grapevine fanleaf virus, we tested the robustness of the molecular diagnostic assay (e.g. reverse transcription-polymerase chain reaction or RT-PCR) for reliable detection of grapevine fanleaf virus. This diagnostic assay is currently applied for reliable detection of fanleaf disease in grower vineyards and grapevines maintained in Certified Mother blocks.

Under objective 2 of the work plan, *deploy best management practices to prevent the spread of Grapevine fanleaf disease*, activity (a) *Develop awareness programs for the benefit of WSDA inspectors*, *Certified Nurseries and wine grape growers*, we shared project results with wine grape industry stakeholders through the following presentations (oral and poster) at the 2010 Washington Association of Wine Grape Growers (WAWGG) Annual Meeting & Trade Show, February 3, 4, & 5, 2010, Kennewick, WA and at the 7th International Symposium on Cool Climate Viticulture and Enology, June 20-22, 2010, Seattle, WA.

1. Naidu, R.A. 2010. Grasping the true 'colors' of grapevine leafroll disease. Workshop "Pest management – What's damaging your portfolio?", Washington State Association of Wine

- Grape Growers annual meeting, Seminar & Trade Show, Kennewick, WA, February 2-5, 2010.
- 2. Naidu, R.A. 2010. How 'clean' are our vineyards? Current status of viruses in Washington vineyards. Workshop "Clean plants: Do you know where your plants have been sleeping?", Washington State Association of Wine Grape Growers annual meeting, Seminar & Trade Show, Kennewick, WA, February 2-5, 2010.
- 3. Mekuria, T.A., Jarugula, S., Soule, M. and Naidu, R.A. 2010. An update on the occurrence of grapevine viruses in Washington vineyards. Washington State Association of Wine Grape Growers annual meeting, Seminar & Trade Show, Kennewick, WA, February 3-5, 2010.
- 4. Naidu, R.A., Mekuria, T.A., Gutha, L.R. and Martin, R.R. 2010. Fanleaf disease 'Polio' of the Grapevine. Washington State Association of Wine Grape Growers annual meeting, Seminar & Trade Show, Kennewick, WA, February 3-5, 2010.
- 5. Naidu, R.A. 2010. Grapevine virus diseases. A presentation for Advanced Viticulture Program students in Hispanic Orchard Employee Education Program (HOEEP), Grandview, WA, March 19, 2010.
- 6. Naidu, R.A., Mekuria, T.A., Gutha, L.R. and Martin, R.R. 2010. Fanleaf disease 'Polio' of the Grapevine. WSU Academic Showcase, Pullman, March 26, 2010.
- 7. Naidu R.A. 2010. "New Vine Plantings what does certified really mean? What are the latest threats?" 2010 Cool Climate Viticulture & Enology Conference. Wine Islands Growers Association. Saanichton, Vancouver Island, B.C., Canada, May 15, 2010.
- 8. Mekuria, T.A., Jarugula, S., Soule, M. and Naidu, R.A. 2010. Current status of grapevine viruses in Washington State vineyards. 7th International Symposium on Cool Climate Viticulture and Enology, Seattle, WA, June 20-22, 2010.
- 9. Alabi, O.J., Mekuria, T.A., Jarugula, S., Gutha, L.R. and Naidu, R.A. 2010. Genetic diversity of grapevine viruses in own-rooted wine grape cultivars grown in Washington Vineyards. The 7th International Symposium on Cool Climate Viticulture and Enology, Seattle, Washington, June 20-22, 2010.

Under objective 2 of the work plan, *Deploy best management practices to prevent the spread of Grapevine fanleaf disease*, activity (b) *Dissemination of information through printed and electronic media, we* disseminated time-sensitive information on grapevine virus diseases via the following avenues:

Podcasts broadcasted via the Fruit Grower Report of the N.W. Ag Information Network (http://www.aginfo.net/).

- 1. Update on vine disease Part I (http://www.aginfo.net/index.cfm/event/report/id/Fruit-Grower-Report-16650), June 17, 2010.
- 2. More on grapevine disease Part II (http://www.aginfo.net/index.cfm/event/report/id/Fruit-Grower-Report-16660), June 18, 2010.
- 3. Grapevine disease Part III (http://www.aginfo.net/index.cfm/event/report/id/Fruit-Grower-Report-16686), June 21, 2010.

We posted these podcasts and additional information on grapevine fanleaf disease at the website: http://wine.wsu.edu/research-extension/plant-health/virology/ for the benefit of wine grape industry stakeholders.

We published science-based knowledge on grapevine fanleaf virus in the following electronic and printed media to bring increased awareness about grapevine fanleaf disease

- 1. Grapevine fanleaf disease detected in Washington vineyards. **Voice of the Vine. May 20, 2010** http://wine.wsu.edu/vinevoice/2010-05-20.html .
- 2. Naidu, R.A. 2010. Fanleaf threat: a concerted effort is needed to prevent its spread. Good Fruit Grower February 15, 2010, Volume 61, No.4, pages 26-27.

Impacts of the overall project:

- 1. Awareness about grapevine fanleaf and other viral diseases is growing as indicated by the number of people accessing the information posted at the Grape Virology website http://wine.wsu.edu/research-extension/plant-health/virology/) for gaining knowledge on various aspects of grapevine virus diseases. The WSU-CAHNRS Website Statistics 2009 report for Wine Grapes Research under "Most Requested Directories" recorded a total of 1935 visitors with 5,288 'hits' and 238,947 bandwidth (KB) usage for three grape virology directories, accounting for an average of 3.7 visitors daily for the year 2009. A total of 965 visitors with 1,028 hits and 26,964 bandwidth (KB) usage was recorded between January and July 2010. This accounts to an average of 5.4 visitors per day for the six month period in 2010.
- 2. Nearly 1,000 wine and juice grape growers, wine makers, home gardeners, nurseries, retailers and other industry stakeholders benefitted from presentations on grapevine fanleaf and other viral diseases at the annual meetings sponsored by Washington State Grape Society and Washington Association of Wine Grape Growers and at the 7th International Symposium on Cool Climate Viticulture and Enology.
- 3. About 10 field inspectors of Washington State Department of Agriculture gained new knowledge about grapevine fanleaf and other viral diseases.
- 4. About 50 members of the Hispanic community working with wine grape industry gained knowledge on grapevine fanleaf and other viral diseases.
- 5. About 50 people enrolled in on-line Certificate Program in Viticulture offered by the Viticulture and Enology Program at WSU gained knowledge on grapevine fanleaf and other viral diseases.
- 6. About 12,000 tree fruit and grape industry professionals and academic researchers subscribing Good Fruit Grower (the only publication that covers the specific interests of grape growers in the Pacific Northwest) benefitted from information on grapevine fanleaf and other viral diseases.
- 7. The Fruit Grower Report of the N.W. Ag Information Network with 70 affiliate radio stations throughout Washington, Oregon, Idaho and Northern California helped to spread the message about negative impacts of grapevine fanleaf and other viral diseases and highlight the benefits of planting virus-tested propagation materials.
- 8. A molecular diagnostic method for the detection of grapevine fanleaf virus is available.

Goals and Outcomes Achieved:

Per activity (b) *Monitor Certified Nurseries for Grapevine fanleaf disease* described in the work plan; they tested 275 grapevine samples collected from 11 cultivars in a Certified Nursery in Washington State. The results indicated absence of GFLV, but presence of GLRaV-3 in some samples. The results have been shared with the Certified Nursery managers and advised the importance of maintaining virus-free planting materials in the Mother Block. Our efforts helped to improve sanitary status of the Mother Block for supplying virus-tested planting materials to growers.

In accordance with activity (c) Characterization of Grapevine fanleaf virus described in their work plan, they completed studies on genetic diversity of GFLV in Washington vineyards. From a practical point of view, the spectrum of genetic diversity of GFLV enabled us to better understand differences in biological properties of the virus in Washington vineyards and develop sensitive diagnostic assays for virus testing in 'Clean' plant programs.

Per activity (d) *Develop diagnostic method for the detection of Grapevine fanleaf virus* described in their work plan, they developed a molecular diagnostic assay for rapid and sensitive detection of Grapevine fanleaf virus in wine grape cultivars and grapevines maintained in Certified Mother Blocks. The molecular diagnostic technique is a valuable tool for the detection of GFLV in grape 'Clean' plant programs in Washington State.

Objective 2 of their work plan, deploy best management practices to prevent the spread of Grapevine fanleaf disease, between June and November, 2009, they conducted the following workshops and outreach activities on fanleaf and other virus diseases of wine grapes to bring awareness about grapevine fanleaf disease for the benefit of certified nurseries, regulatory agencies and growers:

- 1. Grapevine fanleaf disease" for WSDA field inspectors and Certified Nurseries, WSU-IAREC, Prosser Washington (6-11-09).
- 2. Tailgate meeting on "Grapevine virus diseases" for the benefit of vineyard managers, crop consultants and field personnel (9-17-09).
- 3. Tailgate meeting for 'non-traditional' students enrolled in Viticulture Certificate program offered by WSU (9-20-09).

They posted the following podcasts on grapevine fanleaf disease at the website: http://wine.wsu.edu/virology/ for the benefit of wine grape industry stakeholders.

Part I: July 16, 2009; http://www.aginfo.net/index.cfm/event/report/id/14094
Part II: July 17, 2009; http://www.aginfo.net/index.cfm/event/report/id/14108

They made the following presentations (oral and poster) at Industry-sponsored and scientific meetings:

- 1. Gutha, G.R., Mekuria, T.A., Martin, R.R. and Rayapati A. Naidu "Molecular variability of Grapevine fanleaf virus in Washington State vineyards" at the American Phytopathological Society Annual Meeting, Portland, OR, August 1-5, 2009.
- 2. Rayapati, A. Naidu. "Virus diseases of wine grapes" at Western Washington Viticulture Seminar, Woodinville, WA, organized by Puget Sound Wine Growers Association, August 10, 2009.
- 3. Rayapati A. Naidu presented "Replanting Strategies" consisting of grafting, disease, new varieties, clones & rapid propagation" at the Washington State Grape Society Annual Meeting & Trade Show, Grandview, WA, November 19, 2009.
- 4. Tefera Mekuria, Linga Reddy Gutha, Robert Martin and Rayapati A. Naidu presented "Grapevine fanleaf disease in Washington State vineyards" at the Washington State Grape Society Annual Meeting & Trade Show in Grapeview, WA, November 20, 2009.

Lessons Learned:

The outputs of this project have been used in virus-indexing program at Northwest Grape Foundation Service at WSU-IAREC, Prosser, for the supply of 'clean' planting materials to promote sustainability of the wine grape industry in the region. The science-based knowledge on grapevine viruses generated during the project period has been disseminated to different stakeholders (Regulatory agencies like WSDA, Certified Nurseries, growers, Crop Consultants, Researchers and Extension professionals) through presentations at grower-sponsored annual meetings and national scientific meetings.

The project has generated science-based knowledge on the occurrence of grapevine fanleaf disease and other economically important virus diseases of wine grape varieties in Washington State. The results of the project helped to realize the sanitary status of vineyards in the state and formulate appropriate strategies to mitigate their negative impacts on the sustainability of wine grape industry. The information generated from this project underscores the need for continued monitoring of vineyards and Certified Nurseries for different viruses to ensure preventing their spread to new vineyards through planting materials for sustainable growth of wine grape industry in the state. The outputs of this research have been extended to the Northwest Grape Foundation Service at WSU-IAREC, Prosser, WA and Certified Nurseries in the Pacific Northwest for maintaining virus-free certified mother blocks. With the information generated during the project period, the testing carried out in the clean plant programs is more likely to detect different grapevine viruses and thus, provide higher quality clean planting materials for growers for planting new vineyards.

It has been shown that agricultural research and development has high rates of economic returns that average more than 50 percent. Science-based information generated during this project period will help Grape Clean Plant programs to provide virus-tested planting materials to wine grape growers in Washington State. The outreach programs increased awareness of grapevine virus diseases among researchers, extension educators, growers, consultants and industry stakeholders to foster the sustainability of wine grape industry and increase the national (and global) market share for wine grape producers in the state.

Additional Information:

- We shared the results with wine grape industry through presentations (oral and poster) at the 2010 Washington Association of Wine Grape Growers (WAWGG) Annual Meeting & Trade Show, February 3, 4, & 5, 2010, Kennewick, WA.
- We published an article on grapevine fanleaf disease in "Good Fruit Grower" in February, 2010.
- We conducted workshops for WSDA field inspectors and Certified Nurseries in June 2010.
- We published a fact sheet describing fanleaf disease symptoms and distribute to stakeholders in the summer of 2010. We also plan to post this information on the website on grapevine viruses http://wine.wsu.edu/virology/.
- We presented the project results at the 7th International Symposium on Cool Climate Viticulture and Enology, June 20-22, 2010, in Seattle, WA.

Contact:

Dan Nordquist, Director, Office of Grants & Research Development Washington State University PO Box 643140 Pullman, WA 999164-3140 (509) 335-9661 orgd@wsu.edu

Recipient: Cascade Harvest Coalition (K184)

Project/Grant Name: Marketing Research and Strategy for Growing Sales Opportunities at

Puget Sound Farmers Markets

Grant Amount: \$29,500

Money Expended: \$29,427.03

Money Remaining: \$72.97

Summary of Activities Performed:

Despite growing enthusiasm for buying locally, there are a number of real and perceived challenges that have kept the audience of 'core' consumers who regularly patronize farmers markets and shop for local foods in grocery stores from reaching significantly more consumers in the 'mid-level' or '2nd tier' periphery. Some of these include concerns about affordability, convenience, time, variety, quality, physical effort, food safety, and seasonality.

While successful overall, however, our region's farmers markets are encountering some challenges in expanding the core base of customers to ensure a level of sales that will be able to sustain current and new farmers markets over the long run. These range from the national economic recession's impact on consumer spending to the proliferation of new markets themselves and the limited resources to ensure their success, to name just a few.

The purpose of this project was to partner with Puget Sound area farmers markets to conduct market research on ways to attract customers to their farmers markets, provide outreach tools and tactics, and implement specific marketing strategies at four proxy farmers markets.

Goals and Outcomes Achieved:

Work began April 10, 2009, and included the following activities by project team members.

Cascade Harvest Coalition Team:

- 1. Coordinated project team and participants.
- 2. Gathered and compiled relevant demographic, economic and consumer data on all Washington Farmers Markets.
- 3. Developed and implemented proxy farmers market case study questionnaire.
- 4. Held kick-off meeting and subsequent team meetings.
- 5. Developed customer, farmer's market manager and workshop participant surveys.
- 6. Analyzed and summarized market data.
- 7. Conducted project outreach to dozens organizations and individuals. Outreach included web, e-mail lists, blogs and other social media, and newspapers. Outreach reached an estimated 2.5 million viewers.
- 8. Developed and published all web reports and materials. All project reports can be found at www.cascadeharvest.org/programs/farmers-market-research.
- 9. Prepared interim and final reports.

Good Food Strategies Team:

1. Identified attributes of target 2nd tier consumers for farmers markets, perceived challenges, opportunities and strategies to attract these consumers to expand and strengthen the customer base for the region's farmers markets. Produced report, *Expanding the Consumer Base for Purchases of Local Food* (May, 2009).

- 2. Researched the history and operating conditions at each of the selected proxy markets.
- Provided strategic communications recommendations, including key messages, to help farmers market advocates broaden their customer base. Produced report, Strategic Marketing Campaign to Increase Sales at Puget Sound Area Farmers Market.
- Provided an outreach tool kit with templates for materials and cost-effective outreach tools and tactics that farmers market advocates, managers and staff can individualize for their own particular audience. Toolkit titled, *Marketing and Outreach Strategies to Reach More Shoppers and Boost Sales at Washington Farmers Markets* (October, 2009).
- 3. Developed project marketing and outreach materials.

Proxy Farmers Markets Team:

- 1. Coordinated vendor participation in outreach strategies.
- 2. Identified and partnered with local businesses for distribution of Fresh Bucks and other marketing materials.
- 3. Helped conduct outreach and collect customer and sales data.

<u>Cascade Harvest Coalition, Good Food Strategies, Proxy Farmers Markets and other Project</u> Team Members:

- 1. Designed, developed and implemented a Fresh Bucks coupon redemption and other marketing strategies at three proxy farmers markets.
- 2. Conducted broad community outreach to individuals and organizations.
- 3. Provided support for customized outreach opportunities at a workshop for 34 organizations and individuals, including 25 new farmers markets (in addition to the three proxy markets).
- 4. Increased sales of specialty crops by farmers at farmers markets. Based on data gathered from customers shopping at the proxy farmers market, for every one dollar of Fresh Bucks received, an additional four dollars were spent.

Two primary outcomes were identified for this project, and included:

1. Increase 2nd tier consumer awareness by reaching 25% of the area's population, or approximately 1 million people, with a relevant, targeted media campaign about local food, farms and farmers markets.

Outreach strategies were tracked and measured as they occurred throughout the market season. Outlets publicizing the project are listed at the end of this report and included newspapers, websites, e-mail lists, blogs and other social media (e.g. Facebook, Twitter), and new strategic partnerships with local businesses. It is estimated that 2.5 million viewers throughout the region saw information about the project.

2. Increase attendance by 25% and sales by 15% at four proxy farmers markets.

Attendance was measured by interviewing farmer's market managers and farm vendors. The Anacortes and Shelton Farmers Markets both indicated that they had more shoppers compared with an average market day, while Phinney reported little change in visitors. (The Crossroads Farmers Markets, selected as one of the proxy markets, chose not to participate in the market promotion activities). While the

majority of shoppers were regulars at each of the markets, managers did see a number of people who weren't frequent visitors or were new customers. Market managers did hear lots of talk about the program, most were saying they loved receiving the Fresh Bucks, many asked how they could get the coupons. One woman was heard telling a friend that she didn't know about the market until she got some Fresh Bucks and now plans to come regularly.

The Fresh Bucks promotion resulted in increased sales to local specialty crop producers. Sales were measured through shopper surveys and interviews with vendors. Each of the farmers markets taking part in the pilot project partnered with local area businesses to pass out Fresh Bucks. A total of \$260 dollars in Fresh Bucks were redeemed at the Anacortes, Phinney and Shelton Farmers Markets, and generated total reported sales of nearly \$1,000. For individual shoppers, the amount of additional sales per \$1 of Fresh Bucks redeemed ranged from a low of \$1.25 to a high of \$27.50. On average, for every \$1 of Fresh Bucks redeemed, customers spent an additional \$4. Based on the positive feedback and increased sales, the Neighborhood Farmers Market Alliance is already planning on expanding the Fresh Bucks promotion at its markets in 2010.

Lessons Learned:

A number of things could be done to make this or similar projects more successful in the future. These include:

- Starting the project earlier in season, several months prior to markets opening.
 Markets were already open when the project got underway and were actually hitting
 their peak season in summer as the project was fully underway. Given the limited
 capacity of the markets (primarily staffing), it was difficult to coordinate all aspects of
 the research, vendor outreach, business partnerships, and measurement.
- Expanding the project to include more markets;
- Increasing the number of volunteers to conduct shopper surveys at each market (need 5-6 volunteers at each market);
- Developing capacity at each farmers market to conduct shopper counts and vendor sales over time;
- Increasing Fresh Bucks promotion in each community; and
- Expanding beyond a single redemption date.

Based on shopper surveys at the proxy farmers markets, 70% of customers visit their local farmers market less than once a week, and 50% visit two times a week or less. Given the significant investment in time and resources needed to consistently and repeatedly reach traditional 'Tier 2' consumers - those that infrequently or never visit farmers markets – a more effective investment of resources would be to create incentives to attract current shoppers to the market more frequently. The use of Fresh Bucks, other coupon redemption and/or reward programs, offer such an incentive and provide increased revenues to local producers.

The planning session identified a number of issues faced by market managers in terms of their ability to effectively conduct promotion, attract new shoppers, and support market vendors. Most have very small marketing budgets (\$500 or less) and limited staff and volunteer resources. Opportunities to utilize social media more advantageously and to leverage scarce resources by partnering with like-minded community businesses provide good opportunities for the future. Market managers also expressed considerable interest in more opportunities to regularly network and in getting additional support and tools to conduct

shopper surveys, participate in Rapid Market Assessments, and undertake other methods to evaluate current and potential shoppers.

Future Project Plans:

A number of opportunities for further study and application presented themselves in the course of this project. Key among these was the potential to create a pro-farmers market campaign to increase awareness and drive new traffic to farmers markets across the region. Given the need to educate a broader swath of consumers about the important role farmer's markets play in the local economy, in providing healthy foods and supporting local farmers, it isn't enough to micro-target small slices of the population in individual neighborhoods or even cities. Such a 'float all boats' strategy could help leverage scarce resources, getting more 'bang' for the promotional buck, and could be effective across the broad diversity of farmers markets (geographic, demographic, etc). With additional grant funding, Cascade Harvest Coalition and partners such as the Washington State Farmers Market Association, WSU Small Farms Program and others, could undertake the following initiatives toward increasing consumer awareness and support for, and sales at, area farmers markets.

- Strategic Market Analysis The growth of farmers markets in our region proves growing interest and demand for local foods, but the flip side is the potential for lack of planning to ensure new markets are located in places with appropriate population densities with all the baseline ingredients for success. Without careful planning, markets can unintentionally cannibalize each other relying on the same or overlapping customer bases. Some cities such as Portland, Oregon have undertaken in-depth market analysis and research to develop a plan for strategically locating new markets to give them the best chance for success and assure the sustainability of the entire farmer's market system. The Puget Sound region and State of Washington are in need of this same kind of market analysis to help plan future growth and ensure our current farmers markets can thrive.
- Promotion of Farmers Markets at Events Identify public events which align in some way with values shared by farmers' market supporters -- health, wellness, family and community. Leverage these events to educate people and promote area farmers markets.
- Build Community Partnerships There should be more overlap between healthy eating and healthy living/activities. Organizations and businesses that promote or sell goods to foster health, wellness and fitness could collaborate with farmers markets. Identify and pursue partnerships with businesses, local government and NGO's – and team up to promote special events such as Bike to Market Day, Bike to Work Day Month/May – Farmers Market Opening Day.
- Facebook/IPhone Application Work to leverage existing tools (LocalHarvest, Locavore, etc.) to ensure they have accurate information about Puget Sound area markets and foster the use of these tools by a wider audience, or work with a tech expert to develop content and technology for digital program that could be both web and phone data based to provide information about farmers market hours and locations, what's in season, recipes, deals and local farms and food products at the fingertips of the growing youth/tech-savvy population.

- Marketing Campaign Design and implement a broad based campaign aimed at
 educating and engaging "beyond the core" consumers. This campaign could include
 bus and billboard ads, a pledge campaign aimed at getting more people to pledge to
 shop farmers markets weekly for example, media outreach with stories about health
 and pocketbook benefits of shopping at farmers markets, and potentially a region wide
 "Healthy Bucks" style coupon promotion aimed at broadening base of consumers who
 will try farmers markets.
- Developing resources and support for shopper and other evaluation at farmers markets (study design, questions, help with implementation).
- Establish a forum for regular networking and communication among the state's farmer's market managers and advocates.

Beneficiaries and Marketing Outreach:

Cascade Harvest Coalition Puget Sound Fresh FarmLink

Ag Commissions

Washington Family Farmer Resource

WSU Small Farms Team

Washington Sustainable Food and Farming Network

Tilth Producers of Washington

Seattle Tilth

Farmers Market Coalition

Northwest Agriculture Business Center

Good Food Policy Group

Washington State Farmers Market Association

Neighborhood Farmers Market Alliance

Newspapers

Seattle Times
Skagit Valley Herald
Weekly Shelton Journal
Shoppers Weekly
Seattle Weekly

Newsletters

Neighborhood Farmers Market Alliance Market Fresh News

Local Businesses Participating

Whole Life Yoga
Greenwood True Value Hardware
Makeda Coffee
Santoro's Books
St. John's Catholic School
Greenwood Senior Center
Greenwood Sip & Ship
Island Video
Sage Book Store

Enchanted Garden

Lynch Creek Floral
Sharon's Garden Center
Shelton Athletic Club
Kid's Castle
Curves
Balance Day Spa
Las Palmas
Kaleidoscope Massage Therapy
Adrift Restaurant
Penguin Coffee
Gothberg Farms

Contact:

Mary Embleton, Executive Director Cascade Harvest Coalition 4649 Sunnyside Avenue North, Room 123 Seattle, WA 98103 (206) 632-0606 mary@cascadeharvest.org

Recipient: Neighborhood Farmers Market Association (NFMA) (K185)

Project/Grant Name: Seattle Farmer's Market Promotion

Grant Amount: \$18,759

Money Expended: \$18,759

Project Description and Approach:

With the help of the Department of Agriculture grant, the Neighborhood Farmers Market Alliance (NFMA) has produced a number of direct mailed newsletters to reach new farmers market customers.

The NFMA's mission is fundamentally to support farmers. By strengthening our markets, we provide a vibrant and sturdy direct sales channel for local family farmers. In order to drive sales of farmer products, it's important that we continue to reach out to new market shoppers, as well as find ways to ensure that our markets are profitable for farmers by adjusting our vendor mix, location, season length, and times/days of our markets. We know there is a core group of dedicated farmer's market shoppers, but we need to continue to look for new ways to communicate with and educate our new, second tier shoppers. We noticed in 2007 that although our sales were continuing to grow, the number of shoppers wasn't increasing significantly year over year.

The NFMA's goal is to strengthen the toehold we have with the second tier customer and continue to educate shoppers and facilitate connections for our farmers. Our specific change in marketing with regards to this goal was to take our market newsletter—which previously had been a dense, educational piece that was handed out four times a year to 10,000 people and put directly into the hands of our core customer—transform it and direct mail it to targeted neighborhoods.

To that end, and with the help of the WSDA, the NFMA published, direct mailed, and distributed at the markets 3 newsletters in 2009 and 2010, reaching over 100,000 Seattle households. Our newly reformatted direct mailer has bold graphics and shorter articles that focus on the authentic experience of a farmers market. This year's newsletter, sent in early summer 2010, informed the public about the Columbia City Farmer Market move, and featured events and useful information from all seven of our markets.

Problems and Delays:

For the first time in our 16 year history, it wasn't the weather or floods this past season that created the biggest challenges for our farmers. The unprecedented downturn in the economy that started in earnest last September has resulted in decreased sales at the markets. The downturn became evident at the markets last spring and settled in for the long-term in July. Sales at all our markets have been down from the previous year with the exception of the Broadway Sunday Farmers Market which has continued to grow and expand and serve the large dense population of market shoppers who live on Capitol Hill, Seattle.

Results:

Much of the following is YTD statistical data, from a year where the growing season started very late, which impacted both farmers and the markets in general. Two of our markets—West Seattle and U District—are year round, Broadway lasts through December, Columbia City goes until October 20, Lake City Farmers Market will be open until October 7, and

Magnolia and Phinney wrapped up at the end of October.

In 2009, the larger economic forces at work had significant effects on our markets and sales. 2008 had been a record-breaking year for almost all of our markets, with a huge increase in sales, shopper counts, average vendor sales, and most of our other benchmarks. In 2008 we actually refunded stall fees to our vendors to reward them for a great season. The 2009 market season would have been far more devastating were it not for our increased emphasis on reaching new customers through marketing efforts like the newsletter.

Columbia City Farmers Market, 2010:

- Of shoppers polled in the week after the Columbia City Market's grand re-opening and shortly after the last newsletter went out, in mid-July, 35% had seen the newsletter.
 9% of those polled were at the market for the first time.
- Average vendor daily sales are up slightly since last year, \$708 in 2010, \$702 in 2009. (Over \$600 is one of the benchmarks of a healthy market.)
- Shopper counts are the same as compared to 2009, but up 12% since the newsletter/street move.
- Cumulative sales for the season started out significantly lower, but have gradually increased to down 4%, and are likely to finish the season flat.

Lake City Farmer Market:

- We targeted a 5% increase in the shopper base and came far short of that goal. In 2009, the market base shrank by 3000 shoppers, or a 15% drop. However, 2008 was an unusually good year. When compared to 2007, the market base grew by over 20%. The 2010 season is still in full swing, but the trajectory is that shopper counts will be down another 20%, leaving that market with a relatively constant shopper base from 2005-2010.
- While shopper counts are down, the market itself is slightly smaller, which means that the vendors are seeing increased sales individually. Vendor average daily sales are up 21% in 2010 to \$669, which is considered very healthy to most vendors.

Other Markets and Event Statistics:

- The West Seattle Berry Bash was a onetime event to celebrate that market's 10th anniversary. The daily shopper count was 35% more than the same day the previous year, and 33% more than the average daily count for the same month in 2008.
- University District Farmers Market Our goal was to increase shopper counts by 2%; they've increased by 3%. Total sales are up 9%, and vendor average daily sales are up 12%.
- Another goal was to raise shopper counts at our other markets. 2010 shopper counts as compared to 2009 are as follows: Broadway, up 3%; West Seattle, down 15% (but cumulative sales are similar and average vendor sales are up); Phinney, up 3%; Magnolia, down 11%.

Progress as Related to Long-term Goals:

Our original project proposal came out of a concern that shoppers counts were on the
decline. In 2007 the average daily shopper counts were down to 1300/day, from over
2000/day earlier in the decade. While the farmers market landscape has become
much more competitive in recent years, our focus on marketing to second tier
shoppers has resulted in a recovery of average daily shopper counts of close to
1600/day.

- In 2002-2003, farmer market shoppers were spending an average of \$12/person, which has risen to closer to \$20/person. So while shopper counts aren't as high as we might like, shoppers are transferring more of their food budget to local food, and viewing farmers markets not only as a great community event, but as an important part of their weekly shopping.
- In addition to the newsletter marketing project, the NFMA has allocated \$20,000 for its own marketing and farmer stimulus program, Market Buck's. (This program builds on the "Fresh Bucks" program that the WSDA and Cascade Harvest Coalition launched at the end of the season last year.) We've partnered with businesses and organizations in the neighborhoods surrounding our markets to reach out to new customers by offering \$2 cash equivalent vouchers usable at any of our markets until the end of the year. So far this season we have seen \$6,302 worth of Market Bucks redeemed.

Conclusions and Future Planning:

While the NFMA doesn't have plans to launch another direct mail paper newsletter in 2011, we have used this marketing opportunity as a spring board to other creative ways to reach out to both our loyal customers and our second tier customers. In addition to piloting our own Market Bucks program, we've increased our use of Facebook and Twitter, connected with local bloggers, distributed more recipes to teach people how to utilize seasonal goods, and have begun experimenting with an e-newsletter and electronic surveying. Although 2009 was an extremely difficult year financially for our vendors and our markets, we are seeing a gradual return to financial stability due to our dedicated marketing efforts, with the help of the WSDA and the wide array of people we've reached through newsletter distribution.

Our immediate plans include increasing hours at our strongest markets, University District and Broadway, and working with local communities to adjust and support our weaker markets, like Magnolia and Lake City. We'll continue to look for innovative ways to educate and market to new potential customers, particularly as people depend more on the internet and mobile devices for their information.

Lessons Learned:

Broader distribution of Newsletter is not always better. Better targeting in specific communities is needed. In a recession year, incentivizing events aimed at our regular, loyal base of market shoppers is more effective than doing aggressive outreach to the 2nd tier shopper.

Distribute additional copies: Community outreach, education, and tabling opportunities.

They were focusing on attracting and educating the 2nd tier customer as we were losing a percent of 1st tier customers due to the economic recession. Vol. 1 specifically targeted the West Seattle Community in celebrating their 10 years of support for their Farmers Market. They adjusted our 2nd Newsletter to refocus on the Seattle core Farmers Market consumer.

The Newsletter does serve as a wonderful companion piece to their other forms of marketing outreach: Twitter, Facebook, and website.

Additional Information:

A Copy of the WSDA funded newsletter http://www.seattlefarmersmarkets.org/news/Farm%20news%200510%20finalx.pdf

Contacts:

Chris Curtis, Executive Director, chris@seattlefarmermarkets.org
Julian O'Reilley, Operations Manager, julian@seattlefarmersmarkets.org
Neighborhood Farmers Market Alliance
4519 ½ University Way NE, Suite 202
Seattle, WA 98105
(206) 632-5234

Recipient: Washington Mint Commission (WMC) (K186)

Project/Grant Name: Conduct a "pilot scale" of the laboratory studies extracting oil using an energy reducing solvent-free microwave extraction process.

Grant Amount: \$30,000

Money Expended: \$21,189.61

Money Remaining: \$8,810.39

Summary of Activities Achieved:

The purpose of this project was to experimentally confirm whether or not large-scale microwave excitation of mint hay for the purpose of extraction of its essential oils is practical.

An in-field test of the solvent free microwave extraction of peppermint oil was held in mid-August 2009 at Butler Valley Farms, Stayton, Oregon. Results of the trial were limited due to rapid coalescence of the mint oil prior to entry into the separator. This resulted in no mint oil actually received at the normal receiving site. A small quantity of mint oil was discovered during take-down and laboratory analysis indicates it to be pure. For the Solvent Free Microwave Extraction system to work effectively in the large scale (farm operation) condition, it is believed that a significant change in the condensation apparatus will be necessary. The microwave unit itself performed well in the farm environment and after significant modifications, feed systems were developed to take chopped mint hay from existing mint tubs and move it into the extractor. The results of this field trial were adequate to enable design improvements for future development.

Goals and Outcomes Achieved:

- January /09: Discussed plan and project. Kevin Allen presented materials of the results of the prototype testing performed at the Facilities of the Industrial Microwave Company. The summary is that the process appeared feasible and led to the proposal for the field test of this project.
- February /09 April /09: Negotiations on cost of experiment were performed. Initially the concept was to have a system built for the experiment; however the cost of such a system (over \$500,000) was prohibitive. Through very positive discussions with Mr. Lundy and Mr. Biza as well as with the supplier (IMS), it was determined that a method employing the use of one of IMS's pilot scale test units could be accomplished for a trial run in Oregon instead. This cut the cost of the project dramatically (to roughly \$150,000), and necessitated installation of facilities to operate the microwave unit at a designated mint farm site in Oregon, another valid test component.
- May /09: Site for field test selected.

Several sites were considered for the experiment. The requirements for the site included an enclosed space for the microwave generator equipment, access to 440V 3-phase electrical power, close proximity to a working mint farm and still to enable use of the existing water systems, space to install a condenser, weighing equipment, mint hay storage and processed hay removal apparati. By locating at a working mint farm, it was easier to do a direct comparison of the processes. Four sites in the mid-Willamette Valley area of Oregon were considered possible candidates. Butler Farms, Stayton Oregon, was

selected as the site. Butler Farms and in particular Mr. Tim Butler opened the farm site for this work. The researchers are deeply indebted to him for that action.

- June through July /09: Project plan, schedule and development. During this period, first a layout was created then a detailed project schedule was developed. Contractors to install plumbing and electrical circuitry were utilized. Some special fabrication of interface equipment was contracted. Instrumentation for the measurement of the results was developed by Ted Carter and Dr. Ganti Murthy. In addition, rentals of all the ancillary equipment were established.
- August /09: Field test took place.
- Microwave unit shipped from North Carolina 8/12-15/09 and was connected 8/16-17. Microwave system was initially tested on 8/17 and proved functional. On 8/17/09 mint hay was delivered and placed at the input conveyor unit in a standard size mint tub. The conveyor feeding in the mint hay to the system did not function properly at first and a modification was necessary (and performed that day) to enable hay to feed into the system. The plan was at first to dump the mint hay on the conveyor and then have it feed onto the microwave conveyor with regulation of hay thickness by reverse spinning paddles that would set the height of the layer and push back the remaining hay to the hopper. It was discovered that the weight of the mint hav was too great for the design developed and changes were necessary. The mint hay tended to get underneath the guide rollers on the conveyor belt as well. Deflecting plates and a dump plate were attached to the conveyor. The paddles on the hay leveler devices above the conveyor were extended in length to permit a thinner layer of hay to be produced. In addition, the hay was removed from the hopper and much smaller amounts were manually placed on the unit for operation. These modifications enabled the conveyor system to function adequately for the tests. The modifications were completed by the end of Monday, August 17th.
- August 18, 09: During this first shake-down, the microwave unit started operation at roughly 25 KW with a belt speed of 10 feet per minute (fpm). It was discovered that the thickness of hay to be processed through the unit was lower than expected due to "piling" up" of hay segments at the input to the microwave choke unit. Hay thickness was reduced from the targeted four inches to two inches. A spray bar was added to enable the addition of moisture as the ambient temperatures on the experiment days were nearing 100°F. Hay moisture content was lowering and some controlled addition of water seemed advisable. It was decided that additional insulation was necessary on the steam collection manifold as condensate was observed in the manifold and not travelling to the condenser. A vapor trap was devised from a five-gallon bucket with the addition of ice to trap vapors that seemed to be passing through the tube and shell condenser. The system was operated for the duration of the day with some power issues. The microwave generator blew two 200-amp fuses for "no apparent reason" based on the microwave system logs. The technical staff from the microwave company modified their programming during the time necessary to obtain the first replacement fuse and then at the second event did some further work. The conclusion regarding these fuse events was that some power line fluctuations took place, possibly caused by another load on the adjacent line. That other load was the traditional steam distillation system at Butler Farms. After the further modifications performed on the electronics program for the microwave on 8/18, no further fuse blows were experienced for the subsequent test duration. By the end of the day, while water had been received in the condensate barrel,

no mint oil had been observed. Strong mint odor was present and it was believed that the hay leaving the process was rich in oil. Samples of the hay were taken prior to and after the processing. During the operation, one ignition event took place causing melting of a portion of the belt. This was later attributed to affecting some of the aluminum screening into one of the exhaust ports.

• August 19, 09: At this point, it was uncertain where the mint oil was going. Clearly, the odor of oil was present and it was believed that the system was transferring oil to the condenser. The exhaust air flow was being varied to see if it had an impact on the condensate rate or the oil rate but no correlation was found. After the morning operations. since no oil was observed in the condenser, the microwave energy distribution system was reconfigured to apply all the energy to one applicator, from both sides. This also included reducing the ports from which vapors were to be collected to two instead of the initial four. This was done first by fabrication of a "Y" connector for the eight-inch exhaust lines and then attaching two of the four lines to this connector with the exit of the "Y" travelling to the condenser. The other two eight-inch ports on the applicator were sealed to force air flow from the input and exit belt gaps to travel to the condenser and subsequently to the exhaust fan. After some operation in this fashion in the afternoon, at roughly 3:30, it was decided to change to one port on the applicator for vapor removal. Again, this was based on a lack of observable mint oil in the separator system. All further operation was performed with the one pipe draw from the applicator. Initially, that site was near the entrance of the hav and was moved to near the exit of the hav with no major change in the results.

Conditions during 8/19 were as follows:

	1	0	
	Power	Comments	
3FPM	40KW	Airflow 10% Using 4-port	
		collection	
3	50KW	44gpm-condenser	
3	60KW	Water spray on	
3	70KW	Airflow 15%	
3	70KW	15%, higher spray dispersion	
1.5FPM	50KW	Slow belt down for more oil	
		removal	
1.5	60KW	Steam emitting from front	
FPM		section at 100% exhaust	
1.5	70KW	Hay burning took place after	
FPM		20 min	
		Shut down – lunch, clean out	
		burned belt	
		Changed exhaust to one pipe	
		at front and back	
		Fabricated "Y" adapter for	
_	_	pipes	
3FPM	30KW	"Y" adapter in place (2-port	
		collection)	
3FPM	30KW	Operating normally	
		Stopped, insulated piping,	
		changed to one pipe site	
	Belt speed 3FPM 3 3 3 3 1.5FPM 1.5 FPM 1.5 FPM 1.5 FPM	speed 40KW 3 50KW 3 60KW 3 70KW 3 70KW 1.5FPM 50KW 1.5 60KW FPM 70KW FPM 30KW	

1603	3FPM	30KW	Restarted (1-port collection)	
1613	3FPM	35KW	Continued – power increase	
1616	3FPM	35KW	Water condensing – very slow	
			rate	
1618	3FPM	40KW	Operating, condensation rate	
			faster	
1620	3FPM	45KW	Same	
1628	3FPM	50KW	Operation halted due to arc	
1636	3FPM	45KW	No arc, operation restarted	
1701	3FPM	45KW	Hay output temp 105 °C +/- 1C	
1715			Shut down – no oil recovered	
			in separator	

At this point, since no oil had been recovered in the separator, a decision was made to curtail the experiment and take down commenced on August, 20.

8/20 Takedown:

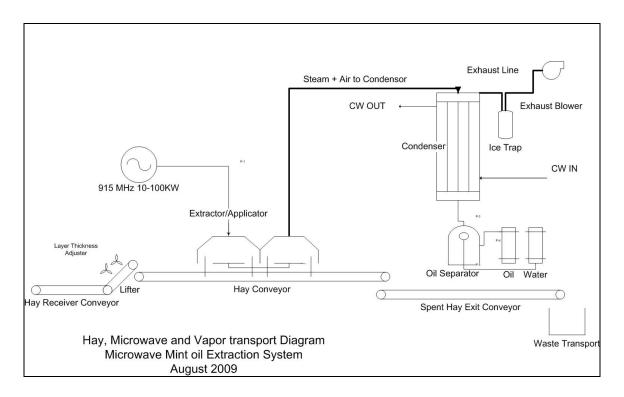
The takedown process commenced on the morning of August 20, 2009. Mr. Miller and Mr. Carter were disassembling the condenser line from the separator while Dr. Murthi was in the process of disconnecting the instrumentation unit. Upon removal of the thermocouple port in the condensate line, a stream of fluid was observed and it had the distinct odor of pure mint oil. While the majority of this stream of fluid dropped quickly to the floor and was lost, some portions were captured in a bucket and later sent to Mr. Allen at IP Callison where it was confirmed to be mint oil. In total, 13 samples were sent to Mr. Allen and of those samples, two were selected for analysis and comparison to the conventionally processed oil. In addition, Mr. Allen measured the moisture and mint oil content of two samples of mint hay, one prior and one after processing during operation at 45 KW and 3 fpm. The detailed results of the composition analysis of the mint oil are available in an Excel® spread sheet form. In essence, it appears that more Menthol and less Menthone were found in the oil extracted than in that from the normal process.

Lessons Learned and Future Project Plans:

For this experiment, an attempt was made to utilize as much of the traditional process equipment as possible to enable a comparison to be made for just the microwave applicator as a replacement for the essential oil extraction device. From the results, it is clear that a more radical approach is necessary to utilize the microwave system effectively in essential oil extraction. Much of the needed information to enable such a system to be constructed has been obtained from this experiment. The next steps for such a development involve an equipment design and development phase followed by a full scale prototype. The logistics necessary to accomplish this project were daunting as it is a brand new method of extracting essential oils from plants. An additional study was performed in North Carolina utilizing 400 pounds of mint hay collected and frozen during this operation. A subsequent report will be published in the future with that information and further conclusions from this study.

Additional Information:

Once a project of this nature is complete, a process called "post partum" is exercised. In that process, ideas of how to develop a superior design are established. The set of such ideas are then reviewed and applied or discarded for the next design. While not included here, several pages of such information were collected and are considered valuable.



Contact:

Rod Christensen, Executive Director Washington Mint Commission 100 N Fruitland, Suite B Kennewick, WA 99336 (509) 585-5460 rodc@agmgt.com **Recipient:** Vashon Island Growers Association (VIGA), (K187)

Project/Grant Name: Farmers Market Promotion

Grant Amount: \$5,705

Money Expended to date: \$5,556.78

Money Remaining: \$148.22

Summary of Activities Achieved:

The goal of this market promotion project was to increase specialty crop farm sales so farming could, over time, become a more viable business option on Vashon Island. VIGA hoped to increase the number of shoppers and sales at both our Wednesday and Saturday Farmers Markets through increased promotion and education.

Goals and Outcomes Achieved:

The expected outcomes were:

- 1. To increase shoppers at the Saturday Market from 17,027-18,000 and increase sales of specialty crop farmer vendors from \$133,518 in 2008 to \$160,222, (an increase of 20%), in 2009.
- 2. To expand the number of farmers present consistently at each Wednesday Farmers Market from 4 in 2008 to 6 in 2009, to increase the number of shoppers at the Wednesday Market from 1,578 in 2008 to 2,000 in 2009, and to increase sales of specialty crop vendors on Wednesday from \$14,307 made in 2008 to \$17,169, (an increase of 20%) in 2009.

Unfortunately these goals proved unachievable in a depressed economy. Due to a depressed economy nationally, sales at most markets around the country experienced a 20-25% reduction in sales in 2009, after years of double digit increases. Vashon Island also experienced a reduction in specialty crop farmer sales this year (A 21% reduction at the Saturday Market and 34% reduction at the Wednesday Market). The number of shoppers at the Saturday Market was up while the number of shoppers at the Wednesday Market was down. There was a slight increase in the number of farmers who were regularly present at the Wednesday Market. A summary of Vashon's market statistics are displayed in the tables below:

Saturday Market	2008	2009	
# of regular farmers*	NA	12	
# of farmers that came at least	NA	17	
once			
# of shoppers	17,027	18,041	
Total Farmer Sales	\$ 133, 518	\$110,572	
Wednesday Market	2008	2009	
# of regular farmers	4	5	
# of farmers that came at least	NA	10	
once			
# of shoppers	1,578	1,034	
Total Farmer Sales	\$14, 307	\$10,641	

^{*}All farmers at the Vashon Farmers Market that grow specialty crops.

Develop the story and create visibility for farmers:

VIGA produced short profiles with photographs of the ten specialty crop farms and farmers that sell at the Farmers Markets over the year, and display them as large signs at each of the vendor's tables when the farmers are present.

Status:

Photos were completed for nine farms. Display signs and content will need to be developed under another funding source as we ran out of money.

In addition VIGA contracted Vashon Island writers Mary Bruno and Kathryn True to write six profiles of specialty crop farmers for the Vashon-Maury Island Beachcomber. VIGA Board member Ralph Moore took photographs of the farms and farmers on a *pro bono* basis.

Status:

Six articles written:

- Island Meadow Farm, July 8
- Farm at the Country Store, August 5
- Hogsback Farm, August 19
- Pacific Potager, September 23
- Plum Forest Farm, October 14
- Island Farm Stands, November 18

Develop the brand:

VIGA used the new logo developed in December 2008 on brochures, website, newspaper ads, rack cards, posters, letterhead, and business cards which will all be updated and printed as part of the grant.

Status:

The new logo was used on:

- The 2009 Vashon Farmers Market poster;
- Ads in the Vashon Maury Island Beachcomber on July 8, July 15 and August 27; and
- The 2009 market bucks used to promote the Wednesday Market.

Graphic designer Steve Wilson revised the rack card designed in 2008 so it now includes the new logo. The card has been available on the WSF Fauntleroy-Vashon ferry throughout the summer and fall season and in some Vashon businesses.

VIGA Board member Lindsay Hart designed a business card with the logo for new manager Ivan Weiss and will design letterhead when needed in 2010. Both designs were done on a pro bono basis.

Expand outreach to targeted groups of potential shoppers:

VIGA expanded the hours of the market manager to increase promotional activities that will attract targeted groups most likely to shop at the Wednesday Market. These groups have been identified as:

- Parents of young children;
- Seniors;
- •Tourists:
- •Workers in the downtown Vashon business community.

The market manager will:

- Write a weekly "What's Fresh" e-mail message about the Wednesday market to the 200 people on the market's e-mail list.
- Write press releases and contact media sources with pieces about specialty crop farmers and Farmers Market history produced under this grant.
- Promote upcoming events at the Wednesday market; produce advertising pieces in conjunction with local media.
- Work with other community members and organizations to promote the Farmers Market.

Status:

What's Fresh Notices

Since 2009 market opening on March 20 the VIGA market manager has written a weekly What's Fresh e-mail to the market e-mail list and also posts it on the VIGA website each week at www.vigavashon.org http://www.stov.us/at/farmersMark.html.

Promotion of Early Season Specialty Crops

In May and June 2009, a time when many people don't think there is any local food to eat yet, Vashon Chef and Farmer Karen Biondo was hired to do two cooking demonstrations at the Market promoting food from Specialty Crop farmers.

- May 9, Cooking with Food from Island Farms in May
- June 13, Cooking with Food from Island Farms in June

Meetings with Business Owners

Joanne Jewell and Board member Ralph Moore met with business owners in downtown Vashon on July 13 and 14 to talk to them about the opening of the Wednesday Farmers Market and to give them over \$250 dollars worth of market bucks for their employees.

Promotional Newspaper Article

Joanne Jewell wrote a piece about the Wednesday Farmers Market opening for the Vashon Maury Island Loop, which ran with a photograph on July 10, 2009.

Media Promotional Ads

Joanne Jewell and Board member Lindsay Hart produced an ad for the Vashon Maury Island Beachcomber, which announced the Wednesday Market opening and included a "fifty cents off" coupon. The ad ran July 8 and 15.

Promotion Through the Arts Community

Joanne Jewell worked with Two Wall Gallery owner Greg Wessel to do a show of the art entered in to 2009 Vashon Farmers Market poster contest. The Art Opening was September 4 as part of the Vashon First Friday Gallery Tour and featured food grown or prepared by island specialty crop farmers.

Promotion to Parents Through Chautauqua Elementary PTSA

On September 16 Joanne Jewell worked with PTSA representative Fran Brooks to provide fruit grown by island specialty crop farmers to parents attending Curriculum Night at the school.

Shopper Promotion through Market Pumpkin Pie Contest

On November 21 Joanne Jewell planned and carried out a pie contest to attract new shoppers to the Farmers Market for the pre-Thanksgiving shopping. Great mostly-free media attention was focused on the event.

Produce Promotional Materials:

 Update and reprint rack cards produced in 2008 and have them placed on the Washington State Ferries Fauntleroy-Vashon Island runs, in island real estate offices, bed and breakfasts, and other business establishments to inform tourists as well as commuters, residents and visitors about the farmers market.

<u>Status:</u> Cards printed in 2008 were placed on the Washington State Ferry Fauntleroy Vashon run since the beginning of May. An updated edition began appearing on the ferries in October.

Windermere Real Estate on Vashon Island has been placing the Farmers Market rack cards in all of the "Vashon activities" folders it gives out to prospective home buyers. Sustainable Tourism on Vashon (STOV) includes the Farmers Market rack cards in its display at the Essentials four stores on Vashon.

 Reproduce six on-site signs designed by the Pierce Conservation District for the Tacoma Farmers Market that describe "the benefits of buying locally."

<u>Status:</u> This task was not taken on as our budget was not adequate to produce the signs.

Lessons Learned:

Vashon Island's specialty crop farmers experienced reduced sales at both the Wednesday and Saturday Farmers Markets in 2009. However, national trends were similar. The promotional and educational efforts provided by the WSDA project helped to keep local specialty crop farmers in the public eye in these hard times, and the number of shoppers was actually up at the Saturday market in 2009 perhaps due to these efforts. It is hoped the increased number of shoppers on Saturday in 2009 may result in higher farmer's sales in the future as the economy improves.

The number of farmers participating at least once in the Vashon Farmers Market remained high through this poor economic year. It is unclear whether those farmers will continue selling at the Farmers Market if sales remain low in 2010. VIGA is assessing whether the Wednesday market is strong enough to continue in the future. This new market, now in its third year, is struggling to stay afloat.

Future project plans

VIGA will continue to promote local farming and the Vashon Farmers Market in an effort to raise awareness about the importance of maintaining local food and farmers as a community resource, and to preserve farming as a viable occupation on Vashon Island.

Contact: Joanne Jewell, Manager, Vashon Island Growers Association

PO Box 2894

Vashon Island, WA 98070

(206) 267-8146 farmersmarket@vigavashon.org

Recipient: Washington State Farmers Market Association (K188)

Project/Grant Name: Market Promotion, Farmers Market Guides

Grant Amount: \$10,100

Money Expended: \$7,986.69

Money Remaining: \$2,113.31

Summary of Activities Performed:

WSDA will partner with the Washington State Farmers Market Association (WSFMA) to promote specialty crop farmers through printing and distributing of the WSFMA market guides.

The WSFMA printed 50,000 copies of the 2009 Market Directory Guide using the funds they were granted. The guides have been mailed to the member markets in the WSFMA for distribution at the markets as well as for distribution throughout their communities at libraries, hotels and motels and Chambers. The guide has also been distributed to the various Visitor and Convention Bureaus, Tourist organizations, and Chambers throughout the state.

Goals and Outcomes Achieved:

- Increasing the number of guides printed and distributed by 40%.
 In 2008 30,000 guides were distributed. In 2009 47,000 were distributed for an increase of 58%.
- Increase the sales of specialty crop farmers by 20%.

In 2008 the sales for the specialty crop farmers was \$22,005,050.

In 2009 the sales for the specialty crop farmers are \$27,600,000, an increase greater than 20%.

- Increase the number of customers attending farmers markets in 2009 by 20%.
 - In 2008 the average number of customers attending a farmers market was approximately 1,000,000.

For 2009 the markets have reported an average of 1,235,000, an increase slightly more than 20%.

Lessons learned:

The increased number of guides and increased distribution points resulted in increased shoppers at the member markets and increased sales for the specialty crop farmers at those markets. Most of the member markets have reported greater than 20% in sales and customers, but there are some markets reporting their sales and numbers are flat or less than in 2008. Some of these markets are located in intensely urban environments and have been in operation for at least ten years. The WSFMA is concerned about this and is starting to analyze why this is occurring.

Most of the markets eight years or younger are seeing continued growth. They think the cause for the flat sales or lower sales at some markets is due to the increase in the number of new markets competing with these longer established markets and the current economic environment. These older markets will need to improve what they offer their customers, i.e. events, demos, vendor diversity, etc. and it is suggested they add the benefit of EBT/credit/debit for their customers.

Future Project Plans:

The remaining 3,000 guides will continue to be distributed at various events, and as requests come in for them. The guides were printed on recycled paper with soy based inks http://www.wafarmersmarkets.com/index.html

Contact:

Jackie Aitchison, Executive Director Washington State Farmer's Market Association PO Box 445 Suquamish, WA 98392 (360) 649-0274 info@wafarmersmarkets.com

Recipient: Washington State Potato Commission (K189)

Project/Grant Name: Continuation of the Washington State Potato Industry Comprehensive

Food Safety Initiative

Grant Amount: \$35,717

Money Expended: \$31,949.31

Money remaining: \$3,767.69

Project Outline:

The produce industry has recently attracted a lot of media attention regarding food borne illnesses. This is a very serious matter for the produce industry. Previous food related illnesses have resulted in loss of life, serious hospitalizations, and a decline in consumer confidence in our food supply. Many specific produce industries have suffered tremendous losses as the outbreaks of these illnesses stop all commercial trade until the specific source is located. Food safety needs to be the highest priority for the protection of consumers and the livelihoods of our produce industries.

The Washington State Potato Commission (WSPC) decided to strengthen its already outstanding food safety track record by becoming more proactive in preventing these food borne illnesses at the farm level. This comprehensive program includes farm employee health/hygiene training materials including a video in English and Spanish, a template for standard operating procedures, signage for farm use, step by step instructions on what documentation needs to be in place for becoming USDA Good Agricultural Practices (GAP) certified, funds to partially reimburse growers the cost of a food safety audit, and farmer training workshops.

These training materials have been shared with other potato producing states and other agriculture organizations in Washington State. This training program has been praised by state and federal officials as a model for others to follow.

Project Approach:

The first step taken was to bring together growers, processors, and fresh packing sheds together to discuss ways to strengthen food safety processes. This team decided the best approach was to focus on implementing the USDA GAP at the farm level in Washington State.

The WSPC was tasked with developing materials to help potato producers implement the USDA GAP program. An internal team was formed at the WSPC to work on developing the materials with reviews conducted by the USDA and WSDA. Materials were also borrowed from programs at Cornell University and the University of Maine.

Most of the materials were produced in house utilizing expert reviews on all drafts before finalizing them. The materials were designed to be easily understood by all of our growers. We hosted training seminars to supplement the materials in our training notebooks. The seminars also provided opportunities to answer any specific questions growers had.

The final piece of this program was to create a reimbursement program to cover some of the costs of the GAP audits. We felt that this financial incentive was important to encourage

growers to become certified. We will not offer reimbursement for the next growing season but will monitor participation to determine whether audit reimbursement encourages participation.

Members of the Commission recently did a review of the program, examining all aspects. All comments were extremely positive and we have made tremendous gains in elevating the awareness of precautions growers can take to prevent food borne illnesses. Prior to spring planting in 2011, we will meet with USDA officials to determine whether any changes have occurred for the USDA GAP program. Those changes will be incorporated into new training materials.

Goals and Outcomes Achieved:

The WSPC created 5 goals and 4 measurable outcomes for our food safety program. They are listed below as well as the results of the outcomes.

Goals:

- 1. Create awareness of precautions to take at the farm level to reduce the risk of food borne illnesses.
- 2. Assist growers in meeting mandatory contract obligations regarding food safety certifications with their processors and fresh packers.
- 3. To lead Washington agriculture by being the first full commodity group to implement a high standard for food safety. The WSPC will share all of its materials with other Washington commodity groups to ease their transition to food safety compliance.
- 4. To create public awareness and confidence in the safety of Washington produced potatoes.
- 5. To continue to subside the costs of audits to encourage participation and compliance with GAP.

Measurable Outcomes Achieved:

1. USDA GAP certification for 115,000 acres (approximately 80% of total crop)
The Washington State Department of Agriculture has notified us that 111,213 acres of potatoes were certified under the USDA GAP program in 2010. When this grant proposal was written, we were anticipating that at least 145,000 acres of potatoes would be planted in the state. Our goal was set to certify approximately 80% of the potato crop. The down turn in the economy was the primary cause for a reduction of 10,000 potato acres. While we anticipated the planting of 145,000 acres, only 135,000 acres were actually planted.

We exceeded our goal of certifying 80% of the Washington State potato crop. The 111,213 potato acres that were certified, represents 82% of the total potato crop grown in the State in 2010. This is the highest USDA GAP certification rate for any potato producing state in the country.

2. Delivery of 300 packets of training materials to potato growers.

The Washington State Potato Commission developed and distributed over 545 copies of a comprehensive training manual on how to become USDA GAP certified. We mailed 437 training manuals to growers, packing sheds, and processors in the potato industry. Another 109 were distributed to various commodity groups, state officials, and other state potato organizations in the US.

The training manual consisted of a notebook containing the USDA audit checklist, a guide on what is specifically required for each question in the audit checklist, a model of standard operating procedures for food safety on the farm, various sample forms needed to track and document USDA GAP requirements, an employee "Health and Hygiene" training video with versions in English and Spanish, key hygiene signage for employees and visitors, and a CD containing electronic copies of all the documents in the notebook which could be easily amended to fit the needs of individual farms. All training materials were produced to include any changes that have been implemented by the USDA.

We exceeded our goal in the distribution of our training materials by 80%. A significant number of our training notebooks were sent to specialty crop growers around the US.

3. Host 2 GAP training seminars

Our original goals of hosting 2 GAP training seminars attracted little interest. This would have been our third year of training seminars so after we receive few RSVP's for our training seminars, it was decided that it was a better use of resources to host trainings via conference calls. Since nearly every grower has participated in a previous training, our calls focused on just the changes that occurred in the USDA GAP program. About 99% of the USDA GAP program remained the same but two new elements were added, traceability requirements and mock recalls. We focused most of our attention of these two new requirements. Additional reminders on the two new requirements were provided via our weekly newsletters during the harvest season.

We met our goal of hosting two training seminars via teleconferencing.

4. Implement FDA approved guidance document for potato production (Currently the FDA does not approve specific guidance documents for individual produce items but will comment on whether the guidance document is scientifically just. Current legislation in Congress may change that and ask the FDA to officially approve specific produce guidance documents.)

We are continuing to work on completion of a specific guidance document for potato production, similar to what has been done for the leafy greens industry. We partnered with the National Potato Council in developing this document. We hired the food safety consulting firm, Intertox, based in the Seattle, WA area, to assist us in developing this document. Intertox has just completed a survey of all food safety activities conducted by potato producers in the US. The next step will be to conduct a thorough evaluation of specific food safety risks in the production, packing, processing, and transportation of potatoes. Both biological and chemical risks will be analyzed.

Moving this effort from a local one to a national effort has resulted in delays. Another delay occurred when it was decided that we could further strengthen our food safety efforts if we could include an analysis of chemical risk along with the original plan of just looking at biological risks. While these delays have prevented us from completing this goal on time, we are confident that we will have a much better guidance document. We anticipated that we would not be able to finish this goal during the contract period so no Specialty Crop Block Grant funds were used on this project.

Conclusions and Lessons Learned:

Our final goal or our food safety initiative was to have a working guidance document in place for potato production. We saw value in collaborating with other potato producing states and other national potato organizations. With the addition of many other participants, our progress has slowed considerably. While we are disappointed in how long it is taking to accomplish this goal, we are confident that this document will be of higher quality and will provide greater benefits to all consumers by the expansion of food safety measures into more potato producing states.

Progress toward Long Term Outcome Measures:

We have completed the 3rd year of food safety training for our potato producers. The high level of compliance by our potato producers shows that we have been very successful in our training efforts. Washington State has the highest percentage of USDA GAP certified potato acres in the country.

Our potato producers also have a very high rate of passing GAP audits on the first attempt and have excellent scores. This shows us that our growers are successfully using the training materials. Our training materials are specifically designed so growers know exactly how to implement food safety measures that will be audited by USDA officials.

For the past two years, our specialty crop block grant has provided reimbursement for the cost of USDA GAP audits. We felt that the implementation of this reimbursement would increase the level of participation in food safety activities at the farm level. An audit reimbursement will not be offered to our growers for the next growing season. It will be important to monitor the level of participation by farmers to determine whether audit reimbursements are a useful tool to increase participation in voluntary food safety activities.

Our continued work on developing a food safety guidance document for potato production will be an important tool for enhancing food safety. This effort produced the first ever risk analysis of the different production practices in the potato industry. Both microbiological and chemical risk analysis are in the process of being completed. Once the level of risk has been identified, mitigation measures can be put in place to further enhance our food safety goals. This will be a very valuable document to producers and will improve the safety of our nations potato supply.

Additional Information:

Enclosed with this final report is a copy of our training materials and a video that was produced from this grant. Also enclosed (hard copy) are the results of a grower survey that was completed by Intertox which will be one of the resources in calculating a risk analysis of industry practices. Please do not hesitate to contact us if you require any additional information about our program.

- 1. GAP Worker Health & Hygiene Training Video (DVD copy attached)
- 2. Potatoes GAP Notebook (CD copy attached)

Contact Person:

Recipient: Maple Valley Farmers Market (MVFM) (K190)

Project/Grant Name: Promote and Open a New Farmers Market in Maple Valley

Grant Amount: \$8,800

Money Expended: \$8,800

Summary of Activities Performed:

This Project was intended to help promote and open a new Maple Valley Farmers' Market (MVFM) on June 20, 2009 with 18-20 specialty crop vendors. The MVFM opened for the 2009 season on June 20th 2009. The market opened with 18 specialty crop vendors and 15 other vendors (artisan/crafter and prepared food vendors). Our first market sales for the day were \$10,860.61 and total attendance was over 2,000 local residents.

Advertising for the market was done through local newspapers with pictures, articles and letters. We had a limited budget and our local newspapers were very generous in providing many free opportunities to us. One of our volunteers wrote a letter to the editor every week providing a narrative of market happenings for the week (copies of articles enclosed). Newspaper photographers walked the market every Saturday and many times their photos were featured on the front pages of their newspaper or website. One of the advertisements we paid for was a weekly ad using our market logo, located in the body of the paper. Our inaugural poster was distributed and posted throughout the area.

We also used e-mail to 'blast' customers who signed up for that service. The e-mail included a list of vendors, products, entertainment and special events at the market. One of our volunteers established an account with Face book and Twitter. Promotions:

- Canvas market bags were given away
- Ice Cream Sundae Day
- \$5.00 market bucks to use at any vendor stall

Special Events:

The MVFM had a special event every week. The MVFM ended the season on October 10. They had become "the Saturday morning place to be" and local residents are still talking about our inaugural season. Their customers were split between mission shoppers bent on specific items and other customers who started at the latte stand and meandered through the market and stayed to have lunch before they went home.

Prior to the Ice cream Sundae Day and in coordination with Marble Slab Ice Creamery, the MVFM Board of Director's purchased the fruit for the Ice Cream Sundaes from our local MVFM farmers to include strawberries, blueberries and peaches. Marble Stall Ice Creamery's stall included signage promoting the "fresh fruit toppings" by identifying the farm stalls we purchased the fruit from. We were successful in cross-marketing two of our vendor products at this event.

Goals and Outcomes Achieved:

One of our goals was to involve the local Tahoma High School (THS) teachers, staff and students in all aspects of the market. Several MVFM Board volunteers met with Tahoma High School staff in February 2009 to work out a plan to utilize students for:

- Website Design: Crystal Hess, THS Technology teacher and two of her students designed the initial MVFM website: www.maplevalleyfarmersmarket.org.
- Marketing Plan: Mike Jackson, THS marketing teacher and class analyzed market survey and developed an advertising plan.
- Inaugural Poster Design: Jennifer Gosnell, THS art teacher and digital art class.
 As an assignment, the digital art class was requested to develop the inaugural poster for the market. A copy of the design that was chosen by several volunteers is attached.
- Student Internship Opportunities: Provide student interns from FFA and FBLA. Deb Wood, THS FBLA faculty advisor, Marie Page, THS FFA faculty advisor and Churri Duncan, Career Center staff and their students designed market application, researched interview questions, performed initial interview of applicants, recommended six to MVFM Board volunteers (all six were hired to intern at the market).

Our secondary Goal was to train six THS students to become Assistant Farmers' Market managers.

Our student interns started working with the market, both vendors and management, on June 20 at 7am. We couldn't have opened the market on time without them. The students helped the MFVM set up the tents and then helped the vendors set their tents up (on a case by case basis). They moved tents and products, sinks and trash cans, signage and banners. They helped direct traffic into the parking lot and dog-sat for families that brought their animals to our no pets allowed (except service animals) in the market. They spent every Saturday morning at the information booth, counting attendees within the market, handing out vendor sales report envelopes and collecting them at the end of day. When all the daily chores were completed and the market closed (at 1pm), our interns broke everything down and stowed it away and then turned to help our vendors pack their stalls. We are confident that our interns could open and close the market without the market managers.

Lessons Learned:

Extensive research was conducted prior to the creation and development of our work plan and we had no problems with its implementation. This work plan laid a solid foundation for future farmers' market seasons. Recruitment of specialty crop vendors to enhance and diversify our market offerings is a part of that work plan. At first bi-weekly meeting of all community committees worked out very well to implement the plan, but after the market opened we suffered meeting burn out. At that point, rather than face-to-face meetings, we went to e-mail.

Vendors recruitment continued throughout the market season as did special event planning. Many items on our initial work plan were moved up or pushed back and a couple of new items were added:

One of our biggest lessons learned is to treat your vendors well. They were our #1 priority and our greatest asset. They are who our customers come to see, everything else is secondary. Our second biggest lesson is that our vendors don't always know how to engage

their customers. Next season, we plan to provide our vendors with strategies, which can help them, promote their products to our residents.

During the last two market days, we had great interest from outside vendors who visited our market inquiring about the 2010 season. We were gratified to hear that our reputation, based solely on word of mouth information received from established MVFM vendors, was very good and hope that we can build on that and recruit even more specialty crop vendors for the next season.

Future Plans:

Our plan for next season is to keep with our 2009 plan as it was successful. Minor changes in forms and paperwork will be forthcoming. Recruitment will begin very early in 2010 and we will work on new strategies to enhance our recruitment of vendors and hope to open in June, 2010 with 25 specialty crop vendors.

Contact:

Patricia Davis, Treasurer 25226 234th Ave SE Maple Valley, WA 98038 (425) 432-7129 psdavis@ix.netcom.com

Recipient: Poulsbo Farmers Market (PFM) (K191)

Project/Grant Name: WSDA will partner with the Poulsbo Farmers Market (PFM) to promote specialty crop farmers and their products at the farmers market through distribution of a flyer.

Grant Amount: \$1,043

Money Expended to date: \$907

Money Remaining: \$136

Summary of Activities Performed:

The customers at the PFM were not coming from the neighborhoods immediately surrounding the market. In 2008 the market was in its' fifth market season. We expected that more people living near the market would be shopping at the market. Our Rapid Market Assessment in 2008 showed that only 33% of the shoppers at the market were from within the Poulsbo City limits, where the market is located. We wanted to do an outreach to those neighborhoods. We developed a door hanger with a \$2 off coupon and information about the dates, times, location and events for the market including our website address for further information. The \$2 off coupons was supported by the PFM marketing budget.

The PFM distributed a door hanger market flyer to 1,000 households the first two weeks of June 2009. We partnered with the North Kitsap High School Rotary Interact Club to distribute the door hanger flyers. The market assistant, Michele and market manager, Jackie supervised the teams, and several PFM board members volunteered with the distribution.

The door hanger was designed by Mixtur Interact, a local marketing firm, whose principal serves on the Poulsbo Farmers Market Board. One of the PFM Board members, a local realtor, assisted the PFM staff with developing the mapping of the neighborhoods to be canvassed.

Goals and Outcomes Achieved:

Goal #1: Increase the sales for the specialty crop farmers of the PFM by 20%:

Outcomes: Sales for specialty crop farmers in 2008 were \$104,843. Sales for specialty crop farmers in 2009 were \$137,744. This is a 33% increase in 2009 over 2008.

Goal #2: Increase the number of customers from within the city limits of Poulsbo shopping at the PFM by 20%.

<u>Outcome:</u> A market assessment was conducted on August 29, and showed that 52.8% of the respondents were from the city of Poulsbo. Previous assessments showed only 33% of shoppers were from the city limits. This is an increase of 19.8%.

Lessons Learned and Future Project Plans:

The project resulted in increased shoppers from within the city limits of Poulsbo, but revealed that there are still areas of the city where very few are coming to shop at the market. We need to concentrate on outreach to these neighborhoods. For 2010 we plan to contact these neighborhood associations and do a presentation about the market.

The sales for our specialty crop farmers increased significantly and we are pleased that this happened. We would like to see their sales increase further for the 2010 season and beyond. For 2010 we plan to include a weekly feature of a certain vegetable and provide information about what it is how to prepare it and recipes. We have a volunteer who will work with the market staff to provide this. This will be a part of the market booth.

We also plan to host a monthly demonstration for how to preserve the specialty crops offered at the PFM. We are aware that many customers do not know how to preserve the seasonal crops for use in the off season. We are partnering with the Kitsap 2020 working AG group and the Kitsap Community Agricultural Alliance to provide this program. It will be patterned after our very successful monthly chef demos.

The market will be hosting its' seventh market season in 2010. We have set a goal to increase per customer spending for 2010. Although we saw an overall increase in the number of customers at the market during the 2009 season, per customer spending dropped from an average of \$13 for 2008, to \$10 per customer in 2009. This could be due in part to the economic environment, but we want our customers to shop at the market like they do at their local grocery stores.

We are hopeful that if we provide education about what the crops are, how to prepare them, and how to preserve them, that the sales and per customer spending will increase. The community outreach we were able to accomplish with the Specialty Crop grant increased the awareness of the market to those areas located in close proximity to the market. There is still a lot of work to do.

Contact:

Annie Eissler, Board Member Poulsbo Farmers Market PO Box 465 Poulsbo, WA 98392 (206) 965-9595 X2238 annie@mixtur.com

Recipient: The Institute for Washington Future (K192)

Project/Grant Name: Bioproducts Educational Initiative.

Grant Amount: \$17,000

Money Expended to date: \$16,997.79

Money Remaining: \$2.21

Summary of Activities Performed:

The Institute for Washington's Future (IWF) consulted with the organizers of five major farm conferences to schedule presentations from state and national experts on the importance of, and commercial possibilities for, increased use of bio-based soil amendments in Washington agriculture. The Center for Sustaining Agriculture and Natural Resources (CSANR) at Washington State University assisted with identifying researchers and industry representatives most responsive to Washington agricultural issues. CSANR also arranged for WSU researchers to speak at the conferences for free, saving the project thousands of dollars on honorarium.

Altogether, 20 presentations, typically 30-45 minutes in duration, were arranged, covering the latest research and commercial prospects for biochar, anaerobic digester products, and brassica seed meals. Some presentations gave bigger-picture views on the decline of soil health due to loss of organic matter and the role bioproducts may play in addressing that. One recounted the history of synthetic nitrogen's widespread adoption in modern agriculture and reviewed the consequences of that development.

IWF staff recorded an estimated 400 people attending all breakout sessions at the five conferences. In addition, 400 conference attendees at the Pacific Northwest Direct Seed Association (PNDSA) conference heard keynote addresses on two nights from speakers that this project sponsored. A more detailed account of attendance is included in the individual conference reports below. All presentations were recorded, and IWF is uploading them to its website. The Power Point documents will also be posted online, when possible.

This project provided a crucial step toward making discussion of bio-based agricultural products a mainstream topic at major Washington farm conferences. Conference organizers were often unfamiliar with the products our speakers talked about but receptive to the presentations and happy to offer something new to their growers. The presentations on biochar were particularly popular and organizers were proud that their conferences touched on this topical item. The keynote speakers at the PNDSA conference were liked so much that they were called back for a panel discussion on strategies for persuading growers to pay more attention to soil health.

Farm conference organizers will likely seek out the speakers sponsored by this project through their own initiative next year.

Goals and Outcomes Achieved:

The project sponsored speakers at the following five conferences:

- 1. The Snohomish County Focus on Farming Conference Everett, Washington
- 2. The Pacific Northwest Vegetable Growers Association Conference Kennewick, Washington

- 3. The Washington-Oregon Potato Conference Kennewick, Washington
- 4. The Pacific Northwest Direct Seed Association Conference Kennewick, Washington
- 5. The Harvesting Clean Energy Conference Kennewick, Washington

Snohomish County Focus on Farming Conference (November 5, 2009)

The IWF scheduled 11 speakers, organized into a track of four panels entitled "Bioproducts: A Recycling Plan for Agriculture." The ten speakers who presented (one could not due to weather) reported on the latest research and commercial prospects for anaerobic digester byproducts, brassica seed meals, and biochar. One panel also discussed sustainable farming practices and the importance of monitoring soil health and fertility. The room fitted with 40 chairs was filled beyond capacity for four sessions, for a total audience of at least 200.

Speakers and Presentations:

Panel 1

Tad Patzek, University of Texas, "The Visible, Sustainable Farm: A Comprehensive Energy Analysis of a Midwestern Farm".

Doug Collins, Washington State University, "Soil Testing and New Tools to Monitor Soil Health".

Panel 2

Keith Bowers, Multiform Harvest, Inc – "Applying Struvite Crystallizer Technology in Farm Wastewaters".

Craig Frear, Washington State University, "Potential technologies and performance potential for phosphorous removal from AD-treated dairy manure and its integration with ammonia removal and recovery".

Kevin Maas, Farm Power – "The Rexville, Washington Dairy Digester Operation".

• Panel 3

Gary Banowetz, Agricultural Research Service, "Biochar and Future Food Production". Jason Streubel, Washington State University, "Harvesting Clean Energy: Biochar as a Soil Amendment".

Panel 4

Mark Mazzola, Agricultural Research Service, "Control of soilborne plant diseases with mustard meal formulations".

Ekaterini Riga, Washington State University, "Nematode control with mustard seed meals".

Lydia Clayton, University of Idaho Nez Perce County Extension, "Brassicaceae seed meals and seed meal extracts as bioherbicides".

<u>Pacific Northwest Vegetable Growers Association Conference (November 11-12, 2009)</u>
The IWF scheduled two speakers who presented on biochar and brassica seed meals. A total of 100 people attended the two sessions.

Speakers and Presentations:

Ekaterini Riga, Washington State University – "Nematode control with mustard seed meals"

Jason Streubel, Washington State University – "Harvesting Clean Energy: Biochar as a Soil Amendment"

Pacific Northwest Direct Seed Association Conference (January 20-21, 2010)

The project sponsored three speakers, two of whom are nationally recognized authors who would have been very difficult for the organization to schedule without USDA assistance.

These two gave keynote addresses to the full conference detailing the problems with eroding agricultural soils and over-reliance on synthetic fertilizers. The third speaker gave a presentation on biochar in a breakout session. These speakers were warmly received and the PNDSA organizers were very appreciative of the USDA funding that allowed them to appear. The authors who spoke were subsequently asked to appear on a panel that discussed strategies for persuading farmers to manage soils better. The authors talked about the need for "soil building" to reverse the decline in soil organic matter that precipitates nutrient loss, erosion, and addition of external fertilizers. All of the roughly 400 conference attendees heard the keynote addresses. 75 people attended the biochar presentation. The PNDSA reports that 40% of the conference attendees were growers, and that approximately 75% of those cultivate specialty crops, so it's safe to say that 120 specialty crop growers saw the keynotes and that 22 of those people also saw the biochar presentation. Altogether, the three presentations sponsored by this project attracted roughly 140 specialty crop growers.

Speakers and Presentations:

David Montgomery: "Dirt, the Erosion of Civilizations"

Thomas Hager: "The Alchemy of Air"

John Miedema: "Biochar: Energy, Fertility, and Carbon Sequestration"

Washington-Oregon Potato Conference (January 26-28, 2010)

The project sponsored two speakers on a panel focused on anaerobic digester systems and the feedstocks and products related to them. One of the products -- struvite (a mineralized phosphorous supplement that is commercially available) - was completely new to the conference organizers. The speakers later received phone calls from conference attendees curious about anaerobic digester systems. 75 people attended this panel.

Speakers and Presentations:

Craig Frear: Washington State University, "Green technology solutions for conversion of potato waste solids to higher value bio-products and bio-energy".

Joe Harrison: Washington State University, "Bio-based Fertilizer from Dairy Manure".

Harvesting Clean Energy Conference (February 7-9, 2010)

IWF staff consulted with the planning committee for this conference, and while we did not directly schedule speakers, we submitted names for consideration, two of which were accepted. Unfortunately, one of those speakers, the director of a company manufacturing distillates from organic waste, canceled at the last minute.

The speakers were scheduled in a breakout session called "Bio-Economy and Northwest Feedstocks – Digesters as Biorefineries: Generating Multiple Revenue Streams," which the project sponsored with a \$1,000 contribution. The conference also featured a breakout session on biochar.

These breakout sessions were well attended – a minimum of 75 people saw each of them. The Harvesting Clean Energy Conference is attended by a wide mix of people from business, law, public agencies, and agriculture, so the number of specialty crop growers who saw the sessions can only be estimated. On the day of the conference, about 40 attendees affiliated with a farming operation had registered.

Speakers and Presentations:

Chad Kruger, and Craig Frear: "Dairy Anaerobic Digester as a Biorefinery". Kevin Maas: "The Rexville Digester Project".

Lessons Learned:

The IWF sincerely believes it achieved its obligation to "provide at least 500 growers and agricultural professional from all sectors of the specialty crop industry access to the latest research, development, and application of leading bioproducts." We reached a highly diverse audience – a wide mix of organic and conventional growers who farm at both very small and larger scales. We did not schedule as many bioproducts suppliers as we'd hoped (6) but that was due to conflicting schedules and cancellations.

The broader mission to "increase interest in development of a Washington-based bioproducts trade organization" has advanced a great deal since administration of this grant began. This was the first initiative that we know of to find and recruit the main body of researchers and business people engaged in the commercialization of bio-based farm products from bio-energy systems. Consequently, the IWF's knowledge base has increased significantly. We have a much better picture of the near-term commercial prospects for particular bioproducts. Biochar, for example, is a highly popular topic, but research is only beginning and commercial applications are not known. Struvite, on the other hand, is backed with processing infrastructure and ready to go to market.

The Renewable Farming Group (RFG) of Washington was formed by the IWF in April, 2009, as the potential association representing the bioproducts industry in Washington. Specialty crop growers comprise the majority of its board. The organization has tracked the information emerging from presentations such as those sponsored by this project, and new partnerships have formed.

For example, the RFG has submitted two USDA grants on behalf of Multiform, Inc, a project speaker, to refine formulations and test applications of struvite with greenhouse starts. A fertilizer business interested in retailing and distributing the product is a grant partner. This same business is now interested in testing biochar as an additive in its fertilizer products, and is in touch with John Miedema, a speaker sponsored by this project and representative of the Thompson Timber Company in Philomath, Oregon.

Future Project Plans:

The IWF now has a useful list of contacts and information that will prove invaluable to the RFG as it pursues commercial partnerships and projects that will expand the bioproducts industry in this state. This project also fostered greater cooperation between IWF and Washington State University's CSANR, which has begun to increasingly rely on IWF to find business partners ready to form commercial applications for the bioproducts the university researches and develops. The IWF and its younger affiliate, the Renewable Farming Group, are assembling the business partnerships and writing the grant applications which we hope will eventually make bio-based agricultural product manufacturing a reality in this state.

Contact:

Kevin Fullerton, Policy & Government Relations The Institute for Washington Future 2021 S. Weller Street Seattle, WA 98144 (206) 204-0404 Kevin@forwashington.org

Attachments / Web Sites:

- 1. Growers Response to Agricultural Safe and Sustainable Practices (GRAS2P), Guidance Manual for Orchard Operations, V2. Included in the December 29, 2009 Annual Report. Also available at http://www.wahort.org/
- 2. Washington State Farmers Market Guide, 2009. Included with the December 29, 2009 Annual Report and also available at www.wafarmersmarkets.com
- 3. Bioproducts Education Initiative. Washington State University Center for Sustaining Agriculture and natural Resources http://csanr.wsu.edu/